OIPE JC110 JUL 1 2 2004 PATENT & TRADEMARK OFFICE

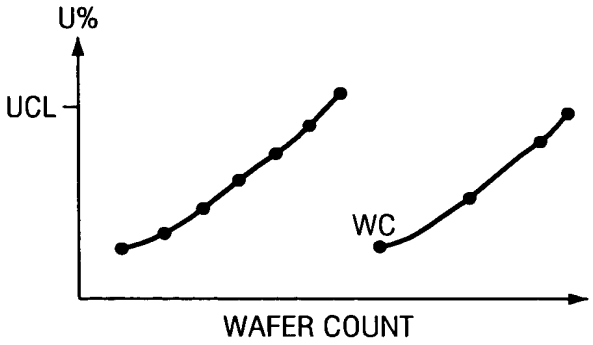

FIG. 1

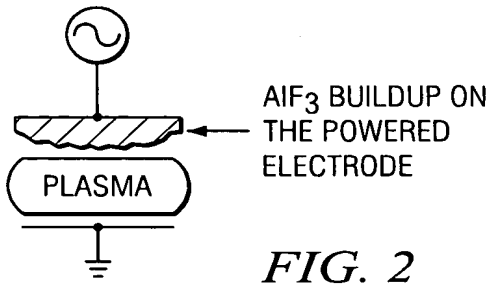

FIG. 2

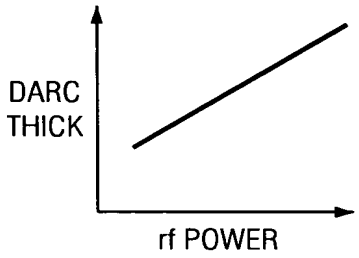

FIG. 3A

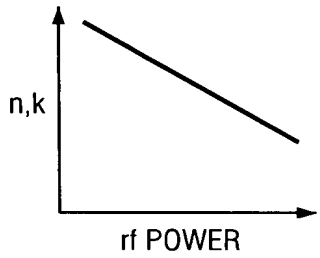

FIG. 3B

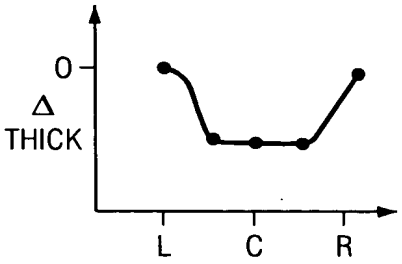

FIG. 4A

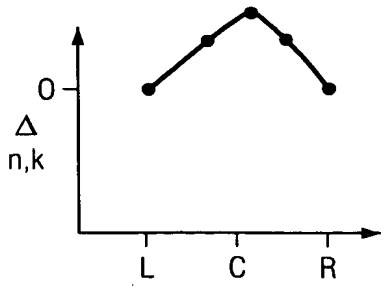

FIG. 4B

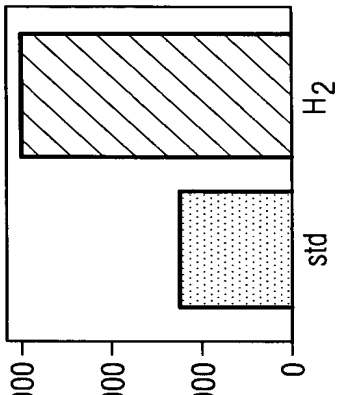
MEAN WAFERS BETWEEN U% FAILS
15000
10000
5000
0
std
H2

FIG. 5A

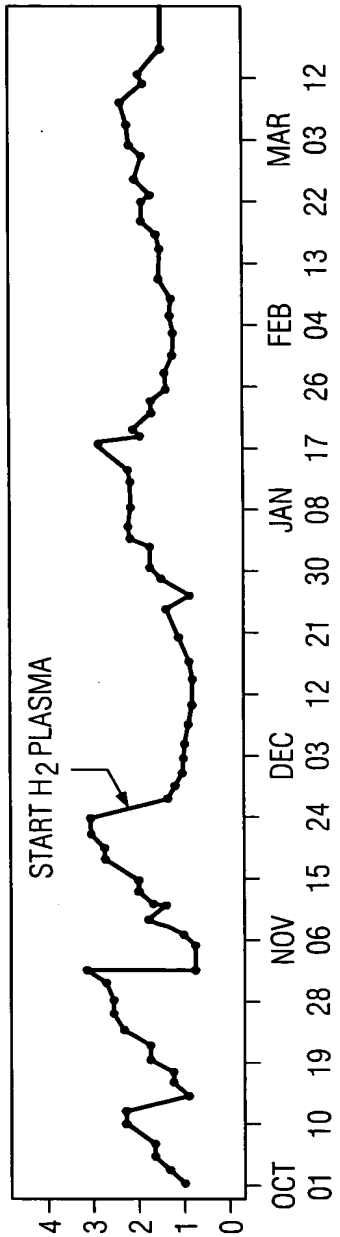
SiON THICKNESS U%
4
3
2
1
0
START H2 PLASMA
OCT 01 10 19 28
NOV 06 15 24
DEC 03 12 21 30
JAN 08 17 26
FEB 04 13 22
MAR 03 12

FIG. 5B

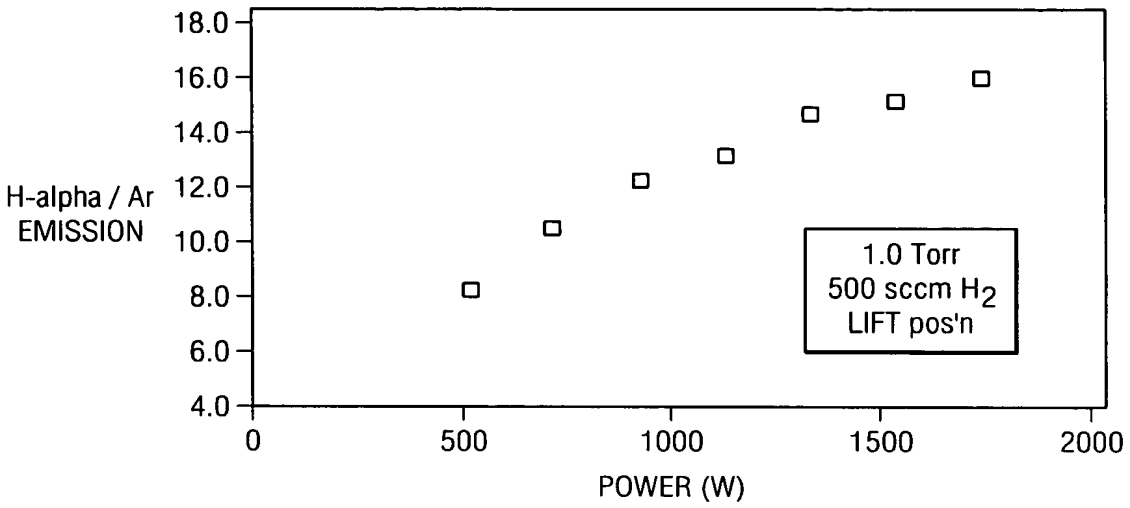
H-alpha / Ar
EMISSION
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
0
500
1000
1500
2000
POWER (W)
1.0 Torr
500 sccm H_2
LIFT pos'n

FIG. 6

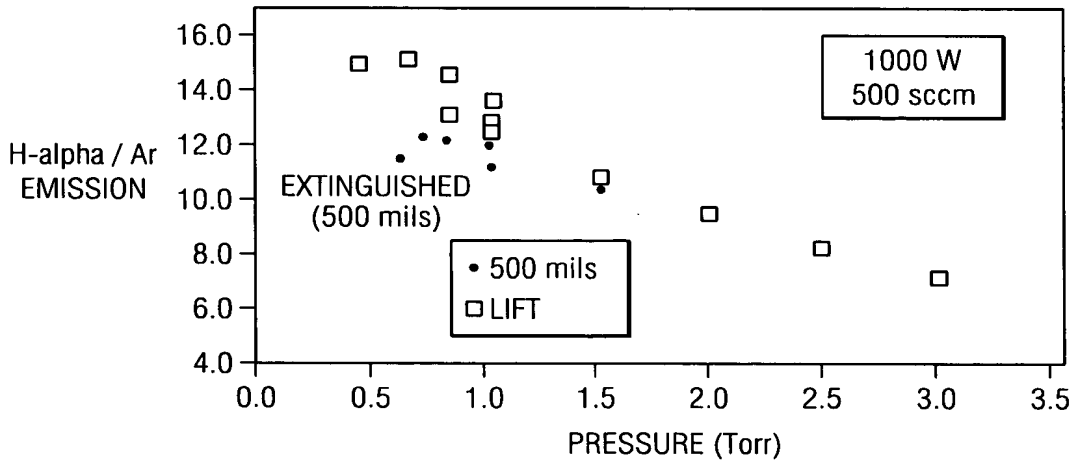
H-alpha / Ar
EMISSION
16.0
14.0
12.0
10.0
8.0
6.0
4.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
PRESSURE (Torr)
1000 W
500 sccm
EXTINGUISHED
(500 mils)
• 500 mils
□ LIFT

FIG. 7